

Hitchcock (H. O.)

CIRCULAR
OF THE
STATE BOARD OF HEALTH
OF
MICHIGAN.

THE ENTAILMENTS OF ALCOHOL;

BEING
THE ANNUAL ADDRESS

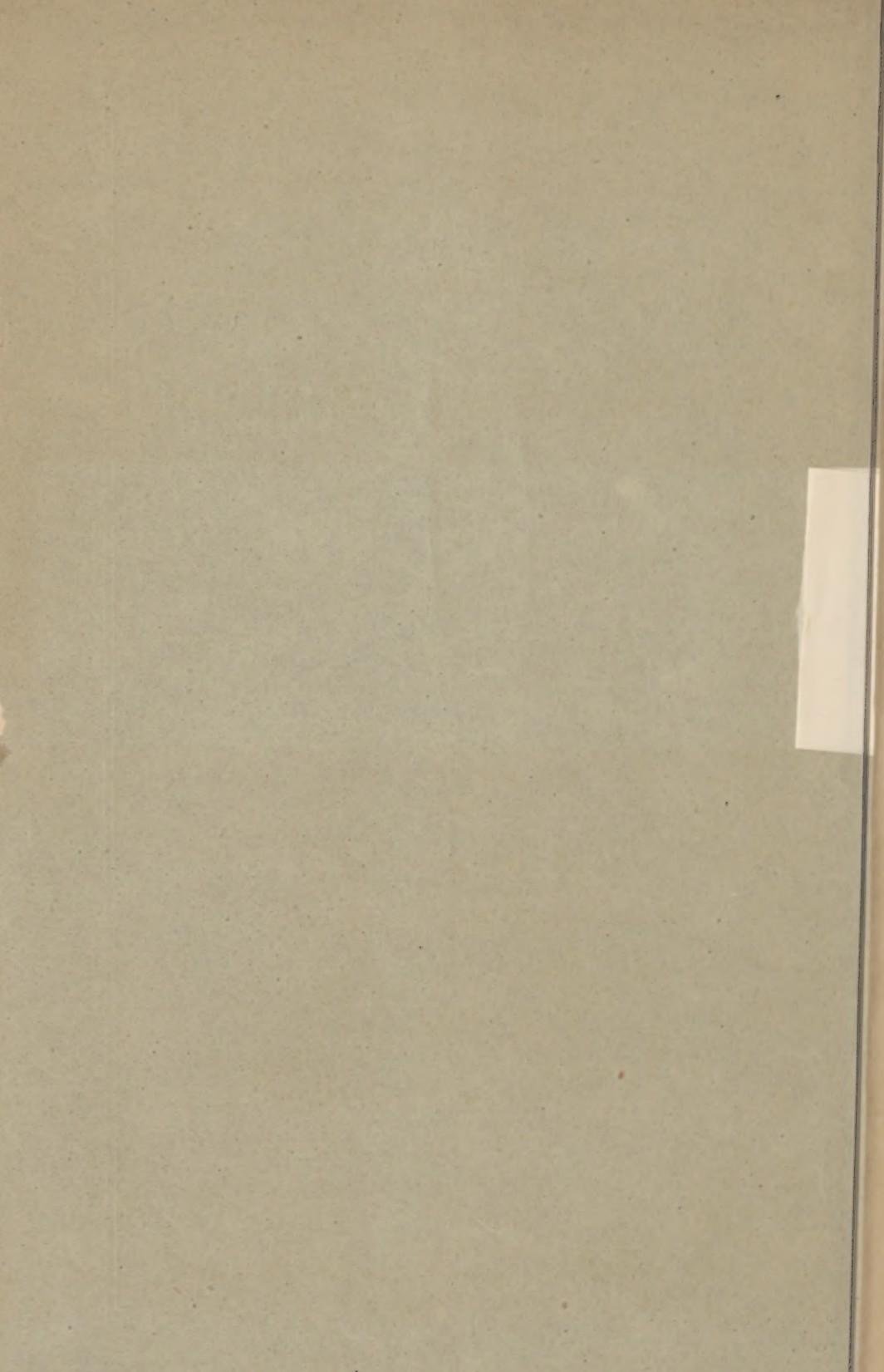
OF THE
PRESIDENT,
H. O. HITCHCOCK, M. D.,

KALAMAZOO, MICH.



BY AUTHORITY.

LANSING:
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1874.



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ENTAILMENTS OF ALCOHOL.

In the discharge of the annual duty which this board has devolved upon its President, I have thought that the effort should be not so much to produce an ornamental paper, a sort of "frontispiece" to the annual report, as to produce a paper in the very line of the legitimate *work* of the board; one that should gather up many facts heretofore known, bearing, in some direction, upon the physical welfare of men, and seek to deduce from them general truths that shall guide to efforts for their well being; in other words, a paper that shall start an amorphous field of fact and truth into a crystalization of law and effort.

In casting about for such a field, the group of facts growing out of the nature of ALCOHOL; its physiological action upon the tissues of the human body; the vast quantities of it which are used under the various forms of alcoholic drinks; the pathological effects of its use upon its consumers; and, above all, its effects upon their posterity, were so great as at once to challenge my attention, and to demand, as it seems to me, the most profound and earnest consideration of this board.

WHAT, THEN, IS ALCOHOL, AND WHAT IS ITS NATURE?

In chemical language, it is a hydrated oxide of ethyle. Its composition is $C_2 H_5 O + H_2 O$. It is nowhere to be found in any product of nature; was never itself created by God, but is essentially an artificial thing, prepared by man through the destructive process of fermentation.

Alcohol is classed as a narcotic or narcotico-acrid poison by Profs. Orfila, Christison, Beck, Stille, and Drs. Periera and Taylor, and indeed by every writer on toxicology.

It is the same identical thing wherever found; in all intoxicating drinks in this country it is *the thing* which intoxicates, its proportions in them varying from 5 per cent in some forms of ale to 53 per cent in brandy, rum, and whisky.

Alcohol is *not a food*. It forms no part of the fibrine, albumen, and casein out of which all the tissues are organized, nor of the fat, starch, and sugar which are chiefly used to generate heat in the body. Neither does it in any way aid in the digestion of the food; but on the contrary the presence of it in the stomach retards or impedes digestion by precipitating the active agent in that function, viz., the pepsine. These facts have been fully established by many eminent physiologists.

"It is a remarkable fact," says Dr. Dundas Thompson, "that alcohol, when added to the digestive fluid, produces a white precipitate, so that the fluid is no longer capable of digesting animal or vegetable matters."

"The use of alcoholic stimulents," say Drs. Todd and Bowman, "retards digestion by coagulating the pepsine, an essential element of the gastric juice, and thereby interfering with its action."

The truth of this position has also been demonstrated in the living human stomach by Dr. Beaumont, in the case of Alexis St. Martin.

"The only influence of alcohol in the stomach," says Dr. Henry Munroe of England, "is that of an irritant."

While the alcohol, taken with, just before, or just after the food, remains in the stomach, digestion is wholly arrested and cannot go on until, fortunately very soon, the offending article is taken up into the blood and is on its way, unfortunately through the whole system, to the emunctories, to be cast out *unchanged* as the offending devil alcohol. That the alcohol is cast out of the system unchanged by the emunctories, has been proven by the new test for alcohol proposed by Dr. Rudolph Masing, viz., a solution of the bichromate of potash and sulphuric acid. By this test, too, alcohol has been found unchanged in all the tissues of drunkard's bodies.

WHAT ARE ITS PHYSIOLOGICAL ACTIONS UPON THE TISSUES OF THE HUMAN BODY?

Taken undiluted into the stomach it would burn and destroy the tissues with as much certainty and almost as speedily as so much aqua fortis.

It has been demonstrated by many physiological experimenters that alcohol, even when largely diluted, coagulates the soluble albumen of the tissues and corrugates them. It changes their chemical relations and properties, so as greatly to disturb the normal series of changes involved in the nutritive operations. Changes in the physical or chemical nature of the animal tissues involves also disorder in their vital properties. "Now, as it is probable that nearly all the organized tissues are developed at the expense of the fibrine, it is obvious that anything that impairs its organizability must have an injurious influence upon the general nutritive operations, and we shall hereafter find confirmation of this inference in that peculiar condition of the system, which results from excessive habitual indulgence in alcoholic potations, and of which the imperfect elaboration of the fibrine is one of the special characteristics."¹

Alcoholic liquors, applied to the skin or mucus membrane, produce various degrees of irritation, even to inflammation and death of the part, according to their strength and the length of time they are applied. "Alcohol, when applied to the living tissues," says Carpenter, "in a sufficiently dilute form exalts for a time their vital activity, but this exaltation is temporary only, and is followed by a corresponding depression." It is a stimulant and narcotic.

Alcohol, too, has a remarkable action upon the blood, giving to arterial blood a venous color, causing the red corpuscles to shrink and lose their regular shape and to lose a part of their contents, which must seriously affect their two functions, aeration and nutrition. (*Carpenter*.)

HOW MUCH ALCOHOL AND ALCOHOLIC DRINKS ARE USED?

I have availed myself of the following facts as collected from reliable sources by Dr. Chas. A. Story of Chicago:²

"There were manufactured in the United States in the year 1867, 100,000,000 gallons of distilled spirits, or about three gallons to every man, woman, and child in the republic."

"Of brewed liquors 400,000,000 gallons, or twelve gallons to each man, woman and child in the republic."

"Of wines 20,000,000 gallons, and imported liquors 20,000,000."

¹ Carpenter—*Use and Abuse of Alcoholic Liquors*.

² Alcohol: Its Nature and Effects.

The value of the sales by retail liquor dealers in the United States during the year 1865, according to the report of Commissioner Wells, was \$1,483,491,-865, or just about \$48 to every man, woman and child in the land. Of this vast sum the people of this State are said to have spent \$52,874,170, or within a fraction of \$45 for every man, woman and child in the State at the present time.

As now one-fourth of the total population would more than cover all who drink, it follows that, at a very low estimate, there is expended on an average each year, for every person in this State or the United States who drinks, the sum of \$200 in round numbers.

THE PATHOLOGICAL EFFECTS OF ITS USE UPON THE CONSUMERS.

Now if alcohol is necessary as an article of food, bad effects ought not to flow from even so free use of it. But those persons who use the most of it ought to thrive the best; ought to live the longest, and to have the best physical, mental, and moral development.

But if alcohol is not necessary for food,—*if it is not food, but is a poison*,—we ought to look for the most baneful effects from so free a use of it.

Now the effect of the habitual use of alcoholic drinks, however diluted, is shown by many eminent physiologists, and by the observation of many eminent physicians, to be similar in nature, though not identical in degree, to the effect of undiluted alcohol upon the tissues.

Although it is almost entirely cast out by the emunctories, the skin, the lungs, the liver and the kidneys, and always *as* alcohol; yet, in passing through all parts of the system, it does, as we shall see, leave everywhere the marks of its burning footsteps. “By experimenting on the blood with sherry wine or diluted alcohol, the blood disc becomes altered in shape and throws out matter from its interior; minute molecular particles also fringe the circumference. Some of these molecules separate from the blood discs and float about in the field; others elongate into tails, which move about with a tremulous motion. When the liquor sanguinis becomes surcharged with alcohol, either by imbibition of small quantities daily or by a large quantity suddenly, the blood corpuscles swimming in it not only become affected, but also the liquor sanguinis itself suffers deterioration.”¹

“The coloring matter,” says Prof. Shultz, “is dissolved out of the blood discs, and the pale discs lose all their vitality, whence less oxygen can be absorbed and less carbon carried out.”

The experiments of Dr. Bocker, confirmed by Dr. Virchow, prove that “alcohol poisons the blood, arrests the development, as well as hastens the decay of the red corpuscle.” “Dr. Bocker noticed the alterations undergone by the blood of habitual alcohol drinkers *as yet in good health*, viz., a partial loss of power to become red by exposure to the air, in consequence of the loss of vitality in a portion of the blood discs. This loss of vitality manifests itself by the formation of black specks (oil) in the discs, (an observation confirmed by Lallemand) and then by their conversion into round pale globules, which in all cases of disease, (*i. e.* diminished vitality) are found in excess in the blood.”¹

“This devitalized condition of the nutritive fluid,” says Dr. Munroe, “is probably the first step to the deterioration of the tissues which it feeds.”

“The eminent French analytical chemist, Lecanu, found as much as 117

¹ The Physiological Action of Alcohol. By Henry Munroe, M. D., F. L. S.

parts of fat in 1.000 parts of a drunkard's blood, the highest estimate of the quantity in health being $8\frac{1}{4}$ parts, while the ordinary quantity is not more than two or three parts, so that the blood of the drunkard contains *forty times in excess of the ordinary quantity.*" (*Henry Munroe.*)

This is fatty degeneration of the blood, and lays the foundation of fatty degeneration of all the tissues of every organ of the body, which is the basis, according to Dr. T. K. Chambers, of "three-quarters of the chronic illnesses which the medical man has to treat."

Can a blood thus vitiated, and bearing in its tide the very polluting and destroying substance itself, minister to and build up healthy organs? Must not all their functions become deranged, and thus a legion of diseases be caused?

"When spirituous liquors are taken into the stomach," says Dr. Aitken in his "Practice of Medicine," "they tend to coagulate in the first place all albuminous articles of food or fluid with which they come in contact. *As an irritant* they stimulate the glandular secretions from the mucous membrane and ultimately lead to permanent congestion of the vessels and to thickening of the gastric tissues."

"Even diluted in the form of beer or wine," says Dr. Lankester, F. R. S., in his School Manual of Health, "it is found to act injuriously on the delicate membranes of the stomach and other digestive organs. When taken in larger quantities in any of the diluted forms, it acts most injuriously upon the stomach, liver, brain, heart, and other organs of the body."

The organs most affected by alcohol when taken into the stomach—the organs in which it is found most to accumulate—are, according to the eminent physiologists. Professors Lallemand and Perrin, the "liver and the substance of the brain. If in the blood it is represented by 1, in the brain it is 1.34, in the liver 1.48."

Let me call your attention to a list of diseases and degeneracies which are developed in and bequeathed to the individuals themselves who habitually or excessively use alcoholic drinks.

For convenience I shall mainly follow Carpenter's list, sometimes using his identical language. This list has been justified and confirmed by thousands of observers, among whom are many physicians in this and other States who have replied to a circular which I sent out upon this subject, and to which reference will be made hereafter.

That intemperance is one of the conditions which tends to produce inflammations of the encephalon, meningitis, and cerebritis, all writers upon the subject agree. A frequent connection, as cause and effect, is established both by theory and observation with habitual intemperance and cases of apoplexy, paralysis, and epilepsy.

Besides these positive diseases, a premature exhaustion of nervous power, manifested in the decline of mental vigor and of nervo-muscular energy, are ranked by common consent among the consequences of habitual excess in the use of alcoholic liquors. That irritation and inflammation of the mucous membrane of the stomach, with a thickened, softened and ulcerous condition is thus caused, is not only attested by hundreds of medical observers, but in the case of Alexis St. Martin was clearly demonstrated in the living stomach by Dr. Beaumont.

He says: "The free use of ardent spirits, wine, beer, or any intoxicating liquor, when continued for some days, has invariably produced these morbid changes."

Inflammatory gastric dyspepsia, with all its attendant cutaneous eruptions and persistent derangements of the liver and kidneys, and its consequent depression of spirits even to complete hypochondriasis, is often the legitimate result of the habitual use of intoxicants.

Dr. Peters, as quoted by Dr. Carpenter, has pointed out the effects upon the livers of seventy persons dead after the habitual use of alcoholic drinks. "In moderate drinkers the liver was generally found to be somewhat larger than usual, its texture softened and its outer surface spotted with patches of fatty infiltration extending two or three lines into the parenchymatous substance, the rest of the viscus retaining its natural color and its edges their normal sharpness. In those who had been more addicted to the use of spirits, the liver was still larger, its edges were more obtuse, and the patches of fat on its surface were larger and more numerous. In old drunkards the liver was very large, weighing at least six or eight pounds, often from ten to twelve; the edges were very thick and much rounded, the parenchyma almost white with fat, soft, fragile, and the peritoneal covering could be torn off with ease."

"These observations indicated the various degrees of fatty degeneration, the result on the one hand of deficient functional activity of the gland, and on the other, indicative of an excess of fatty matter in the system." To these conditions are to be added the granular liver, or the "gin liver," as it is called.

Quite analogous to these degenerated conditions of the liver are the various degenerations of the kidneys, especially Bright's disease, or granular degeneration of the kidneys.

Of this disease Dr. Christison states that "from three-fourths to four-fifths of the cases which he met with in Edinburgh were in persons who were habitual drunkards, or were in the constant habit of using ardent spirits several times in the course of the day."

"The experience of English hospitals is precisely similar," says Dr. Carpenter.

Gout and rheumatism are often found to be directly or indirectly caused by the use of alcoholics. Acute and chronic inflammation of the heart and arteries are not infrequently traceable to alcoholic intoxication, and "it cannot therefore be regarded as impossible," says Dr. Carpenter, "that those more chronic disorders of their walls, which give rise to aneurism, softening, fatty degeneration, and other structural changes, should be favored if not absolutely produced by the habitual presence of alcohol in the circulating current."

Besides these positive diseases, there is developed by the habitual use of alcoholic stimulants a marked *diminution of power to sustain injuries by disease or accident*, and a remarkable *liability* of those who indulge to *epidemic diseases*.

With the former of these positions the experience of every physician of any considerable practice is in harmony. How often are physicians disappointed at the results of diseases in cases of adults during the age when they ought to be in their prime. Many cases of fever and of many forms of inflammation, as well as almost every grade of accident and surgical operation, prove fatal unaccountably unless the habit of the subject as to the use of alcoholic drinks be taken into the account.

As to the liability of drinkers to disease as compared to sober, W. Mareet, M. D., F. R. S., has an interesting chapter in his work on "Chronic Alcoholic Intoxication." His tables are based upon 695 cases of out patients, carefully observed at the Westminster Hospital. Of the whole number, 695, two-thirds, or 463, were caused by indulgence in alcohol, and were preventable by abstinence therefrom.

And it will be noticed that Mareet does not frame his tables on the distinction of "drinkers and total abstainers," but upon the distinction of "drinkers to such a degree as plainly to do them injury, or to such a degree as ought to do them injury," and all others. Had his tables been calculated upon the basis of drinkers and total abstainers, it cannot be doubted that the liability of drinkers to the diseases mentioned would have been considerably increased. Dr. F. R. Lees, P. S. A., in his Prize Essay on the Liquor Traffic, says: "Drink has the characteristic of predisposing to attacks of disease and preparing the way for the winged pestilence."

Let an epidemic appear in our midst, drunkards are its earliest victims, and its ravages are most desolating in those districts where drinking prevails.

Dr. Anderson of Glasgow states as the results of his experience in the treatment of 225 patients in the epidemic of 1848-49, "I have found the use of alcoholic drinks to be the most powerful predisposing cause of malignant cholera with which I am acquainted. So strong is my opinion on this point, that were I one of the authorities and had the power, I would placard every spirit shop in town with large bills containing the words 'CHOLERA SOLD HERE.' The comparative mortality in that epidemic he states was 91.2 per cent of the drinkers to 19.2 per cent of the sober."

During the epidemic of 1832, it was noticed in Montreal, where 12,000 cases occurred, that "not a drunkard who was attacked has recovered, and almost all the other victims were moderate drinkers."

"In Warsaw it was found that 90 per cent of those who died of the cholera had been in the habit of drinking ardent spirits to excess; and at Tiflis, in Russia, a town of 20,000 inhabitants, every drunkard is said to have been carried off by the disease."¹

In order to ascertain as far as I could the current opinion and observation of various members of the medical profession who are engaged in active practice, I prepared in circular form the following questions and sent them to about two hundred physicians in our own State, and about two hundred prominent physicians in other States:

1st. What percentage of sickness in adults, within your observation, is directly due to alcohol?

2d. What percentage of deaths in adults, within your observation during the last year, is due directly to alcohol?

3d. Does alcohol, in your opinion, shorten the lives of its victims, and to what degree?

4th. What percentage of inherited disease and enfeebled constitution is traceable to alcoholism in parents or ancestors?

5th. What forms of disease, in your observation, are traceable immediately or remotely to alcohol?

6th. In which parent is alcoholism most likely to transmit disease or enfeebled constitution?

7th. In your opinion, based upon your observation, are the effects of alcoholism, immediate or remote, amenable to treatment?

8th. Does your observation show that there is danger of producing the state of alcoholism by the use of medicinal tinctures or elixirs?

To this circular I have received many replies, which may be consolidated as follows:

¹ *Bacchus Dethroned. A prize essay by Frederick Powell.*

To question No. 1 the replies varied from 1 per cent to 75 per cent, with an average of 11 per cent.

To question No. 2 they varied from 1 per cent to 50 per cent, with an average of 13½ per cent.

To the third question the answers varied from 5 per cent to 50 per cent, with an average of 28 per cent.

To No. 4 the replies varied from 5 per cent to very large and 50 per cent, averaging 21 per cent.

The replies to No. 5 indicate the following as diseases actually found in practice and traceable to alcohol: "Inflammatory diseases of the brain;" "apoplexy;" "many forms of paralysis;" "insanity;" "imbecility;" "diseases of the stomach, liver, and kidneys;" "all diseases dependent upon fatty degeneration;" "many skin diseases, gout, and rheumatism."

The replies to question No. 6 were nearly equally divided between "father" and "mother."

Nearly all thought the effects of alcoholism were in a fair measure amenable to treatment.

Quite a general uniformity in the replies to No. 8 shows that the medical profession do not think the danger very great of producing the state of alcoholism by the use of medicinal tinctures and elixirs, excepting when they are used in considerable quantities and for a long time, as in several cases mentioned by Dr. Wm. B. Eger, Jr., of Charity Hospital, New York, where the depraved appetite was created by the use of tinctures of cinchona and gentian. Quite a number of my correspondents spoke particularly, however, of the danger of creating the depraved appetite by the use of some of the proprietary "bitters" now in so general use. But of this danger I shall speak farther on.

But, it may be asked, if alcohol causes such a percentage of deaths among adults, why does it not appear so in our vital statistics?

The answer is that in almost all the cases of death, more or less caused by alcohol, there is some disease or accident intervening which is credited with being the real cause; and in many other instances in which persons do actually die of delirium tremens, or even from the immediate effects of an overdose of alcohol, the physician will trump up some disease, to give to the family, of a more respectable sound, and this *respectable lie* gets into the vital statistics.

In the vital statistics of this State for 1870, out of 10,766 deaths there are 14 attributed to "alcoholism." I have had the curiosity to look over the list of deaths of adults for that year which occurred in the township of Kalamazoo, and I find that out of the 64 deaths 10, or 16 per cent, were more or less directly attributable to the use of alcoholic drinks to my personal knowledge. But in the report from which the vital statistics were compiled they were all said to have died of respectable diseases. I have no doubt that the same, or even a greater per cent, will obtain throughout the State.

I have purposely passed over, until now, two or three diseases or classes of disease so that, being last spoken of, the mind might rest upon them the longer, for, although the diseases already named are exceedingly grave, yet these, affecting as they do the intellectual and the moral condition and development of the man, appear to me to challenge our more serious attention.

"There are," says Dr. Carpenter, "some individuals in whom a fit of positive madness, persisting for some time after the immediate effects of the stimulus have subsided, is brought on by every excess in drinking."

This he terms "delirium ebriosum." It is not intoxication, but a consequence

of it; it is the *tonic* delirious excitement resulting from intoxication, while delirium tremens is the atonic excitement of a nervous system exhausted by long continued intoxication.

Dr. Carpenter, while discussing delirium tremens, says: "It is important to remark that a slighter form of this disease marked by tremors of the hands and feet, deficiency of nervous power, and occasional illusions, will sometimes appear as a consequence of habitual tippling, even without intoxication having been once produced." Marcet calls this a distinct disease, and gives it the name of "chronic alcoholism."

"The symptoms of the disease depend on a functional disturbance of the nervous system which may last for weeks, months, or years, even after the habit of excessive drinking has been given up." It is a degenerated condition of the man in consequence of the more or less complete saturation of the system with alcohol; a condition in which the will is weakened, while the baser appetites are strengthened; a condition of the citadel that invites the attack of the enemy by having exhausted the resources for defence. In insanity, on the other hand, we have a condition of the man still farther degenerated—a citadel in the very confusion of capture and pillage, while in dementia and idiocy the citadel is dismantled and in ruins.

"Lord Shaftesbury, after having acted as commissioner of lunacy in England for twenty years, and as chairman of the commission for sixteen years, says, having made inquiries into the matter, the result is that *fully six-tenths* of all the cases of insanity to be found in these realms arise from no other cause than from the habits of intemperance in which the people have indulged."

"The number of deranged people in a country corresponds very closely with the amount of strong drinks that are consumed. Till the introduction of fire-water among the American Indians, insanity was unknown. In Cairo, comparatively teetotal, there is one insane person to every 30,714 of the inhabitants. In Spain, comparatively sober, the consumption of alcohol being only one gallon per head per annum, there is one insane person in every 7,181. In Normandy, consuming two gallons of alcohol per head per annum, one in every 700. In Norway, consuming two gallons, one in 551. In England, consuming two and a half gallons, the proportion is one in every 430 of the inhabitants."¹

In Michigan, where, in 1865, according to Commissioner Wells' report, before referred to, the sales of the retail liquor traffic amounted to a little more than \$45 for every man, woman, and child in the State, the census of 1870 states that there are 829 insane persons in a population of 1,184,282, or one to every 1,428. In the United States the census gives one insane person to every 1,029. While in New York, where \$56 per annum for each inhabitant were spent for alcoholic drinks, there is one insane person to a little less than 700.

I have no doubt that many other elements than the use of alcoholic drinks among the people, enter into the etiology of insanity; but certainly these figures should arrest our attention, and if possible, statistics of this kind should be verified with the misleading elements eliminated.

In reply to the following questions sent in circular form to the insane asylums of this country, I have received the following statistics of 24,789 cases of insanity as related to intemperance:

1st. In what percentage of the inmates of your asylum has insanity or epilepsy, in your opinion, been due to alcoholism in the individual?

¹ Dr. Lees' Prize Essay on the Liquor Traffic.

2d. In what percentage of cases, in your opinion, is it due to hereditary degeneracy, taking its origin in alcoholism in the parents or ancestors?

3d. Is the former percentage, in your opinion, increasing?

4th. Is the latter percentage, in your opinion, increasing?

5th. From alcoholism in which parent, is hereditary degeneracy the stronger?

6th. Does alcoholism, in your opinion, tend directly to shorten life?

7th. To what degree?

8th. Does it tend decidedly to deteriorate and exhaust the race?

9th. What other origins of the depraved appetite for drink do you recognize than alcoholism in the individual, or his parents or ancestors?

10th. Does alcoholism give origin to other forms of physical and mental degeneracy?

11th. What percentage of those persons in whom the diseased or depraved appetite takes its origin in alcoholism, either in the individual or his parents or ancestors, are, in your opinion, curable?

12th. Which class is the most amenable to treatment?

To question No. 1 I received various answers, giving the percentage of cases as from "6 to 20."

To question No. 2 I received one answer giving the percentage as "30 or more," and one other giving it as "20," while nearly all who replied at all said "no data."

To the 3d and 4th questions most of the replies were "yes," while some replied "don't know," "can't say," or "no data."

A few replied to the 5th question "mother," and a few "father," while most said "don't know," or "can't say."

To the 6th question all said "yes."

And to the 7th the answers were from "decidedly" to "25 per cent."

All said "yes" to the 8th, while from all the replies to the 9th question I gathered that "any physical degeneracy, and many unfavorable conditions, and many things which are assigned as causes of insanity, may develop the appetite for strong drink."

And nearly all the replies to the 10th agree in saying that "alcohol does give rise to various other forms of physical and mental degeneracy, such as deaf mutism, blindness, idiocy, viciousness, and low, depraved appetites."

From the statistics of the 24,789 cases of insanity, sent me by 14 asylums, I have compiled the following:

Of all the cases of both sexes, intemperance was assigned as the cause in 7 per cent; of all the cases of both sexes, less 7,661 "unknown" or "unassigned," in 10 per cent; of all the cases of both sexes, less 7,661 "unknown" and "unassigned," and 2,006 under 20 years of age, in 12 per cent; of all the males (13,214) 13 per cent; of all the males, less 4,092 "unknown" or "unassigned," 18 per cent; and of all the males less 4,092 "unknown" or "unassigned," and 1,085 under 20 years of age, 19½ per cent, while of all the females only 1½ per cent were attributed directly to intemperance.

I have to remark of the superintendents of the 60 asylums for the insane to which I sent my circulars, that only 14 of them replied at all, indicating, I think, that they take very little interest in the subject, or that the records of their asylums were barren of statistics, or probably both.

The replies and reports from these fourteen indicate that there is no great dependence to be placed upon their statistics of "alleged causes of insanity."

Under "intemperance" as a "cause" is included in these reports only those

cases, who by personal indulgence in intoxicating drinks and beastly intoxication "known to all men," have brought upon themselves a degeneracy of the system that has had a sudden outbreak in insanity, following, perhaps, on the heels of a debauch; while there is no account taken of the degeneracy, whose outbreak may be to-day insanity, but whose origin was in the secret, moderate, but long-continued use of alcoholic stimulants, or in the drunkenness or other vice of parents or ancestors.

Of this Dr. C. H. Hughes, superintendent of the Missouri State Lunatic Asylum, says: "Few know how many alcohol directly or indirectly sends to our insane asylums. The tables of causes of insanity of these institutions do not even fully show this, for the reasons that many friends of the insane withhold the truth from the asylum record books, when they know the vice of liquor-drinking to be the real cause. In many instances, also, where alcohol is really to blame, the friends are not certain that the use of liquor has been the cause of the "business failures," and "perplexities," "domestic afflictions," "bereavements" and "infelicities," "ill health," and "nervous prostration," so often recorded as the immediate or direct causes of insanity, and they give the patient, for the sake of his friends and his character, the "benefit of the doubt." Only diligent inquiry on the part of asylum superintendents brings out the truth that liquor-drinking is the root of much evil that the world in general, with all its knowledge upon this subject, knows not of,—that it is at the bottom of much of the mischief done to the human system, terminating in insanity and accredited to other causes.

"The offspring of the inebriate,—even to the third and fourth generations,—suffer for the vices of their parents. They are either dipsomaniacs, epileptics, impotents, paralytics, idiots, imbeciles, possessed of inordinately vicious, criminal, or immoral instincts and propensities, or totally insane.

"Brain changes begun through the instrumentality of alcohol in the parents are thus developed and completed in their children, conceived and born after the formation of the habit of drinking. The seeds of mental or moral defect, or of physical disease, sown in the incipient drinker, may thus remain, comparatively speaking, dormant in him through his life, but find rich soil for rapid growth to baneful perfection in his offspring."

Dr. Andrew McFarland of Oak Lawn Retreat, Jacksonville, Ill., thus writes me under date of February 2d, 1874:

"MY DEAR SIR—Your favor of the 29th ult. reached me to-day. The remark appended to your former circular was prompted more from a strong conviction that the line of your inquiry is a most important one, and likely, if followed, to educe important results to the cause of humanity, than from a consciousness on my part, of specific facts possessed, worth your present use. And I fear my present effort can aid you but little, because those of us most impressed with the fact that the larger portion of the ills that flesh is heir to are literally visible inheritances, are yet without the data in figures that prove the conviction true.

"My own reflections on the subject have grown from the admission of nearly 5,000 individuals to two several State asylums for the insane,—a valuable field of inquiry, indeed, but almost useless because the inquiries you are pursuing come only incidentally into notice.

"The question of hereditary predisposition to insanity formed, of course, a never-omitted part of the record; but vices,—depraved habits of ancestors,—could not, for obvious reasons, come so readily within the field of inquiry. And

I suspect all with the same kind of experience,—and even more of it.—must be just as barren of actual facts as I am, for the same reason.

“Now, as ‘art is long,’ allow me to say, in passing, that I do not think the mass of material our elemosynary institutions enable us to gather will be worth much until records kept are in a form prescribed by legitimate enactment, and made full on these points.

“The records of insane asylums, I know, are lumbered up with facts of not the least scientific value, while nothing in them throws light on the philosophy of disease, as it affects man as a whole. It seems a science we have hardly begun to learn, though its materials are found, more or less, in every man’s history, and, as I say, there seems no way to begin till penal and sanitary institutions can call for their facts *by authority*.

“The more mental disease is observed, the more its generally-assigned causes sink from view, and the great all-sufficient one of inherited predisposition assumes prominence. And I am led to say, from full thought, that *three of every four* entering insane asylums will show a blood-taint so sufficient as to put out of sight all other causes.”

“Dr. Morel of France,” says Dr. Story, “connected for several years with Salpetriere Hospital, where there are more than one thousand insane persons, and afterwards for several years superintendent of Mareville Lunatic Asylum, equally large, states that there is always a hopeless number of paralytic and other insane persons in our hospitals whose disease is due to no other cause than the abuse of alcoholic liquors. In one thousand upon whom I have made especial observation, not less than two hundred (20 per cent) owed their mental disorder to no other cause.”

“Dr. Behies, in making a report on the physical causes of insanity in France, says that of eight thousand and eight hundred male lunatics, and seven thousand and one hundred female lunatics, thirty-four per cent of the men and six per cent of the women were made insane by intemperance.” “And Motet reports among eight thousand seven hundred and ninety-seven cases of insane from physical causes, there were three thousand and forty-five drunkards.”¹

Dr. Carpenter quotes the report of Dr. Hutchinson of 1,900 insane patients in seven years in the Glasgow Lunatic Asylum, in which within a small fraction of 20 per cent are set down as caused by intemperance. “In one asylum in the east of London the per cent is 41.” And Dr. McNish states that of 286 lunatics at that time in the Richmond Hospital, Dublin, one-half owed their madness to drinking.

There appears to be quite a discrepancy between the statistics, as given by Lord Shaftesbury, concerning the relation of insanity to alcohol, and those that we have gleaned from our own asylums, bearing upon the same subject, in this country.

The discrepancy will, I think, be seen to be more apparent than real, when several considerations shall have been noticed.

In the case of insane male adults no effort has been made, or at least none has been reported, to ascertain whether they were children begotten while either parent or both were the subjects of chronic alcoholism or of intoxication. No statistics of this kind are reported either of the insane under 20 years of age. The fair presumption of this class who have become insane before many of the causes that tend to produce insanity in older persons have come to bear

¹ Alcohol and its Effects. Dr. Chas. A. Story.

deleteriously upon them, is that many or most of them have some inherited degeneracy that makes them especially susceptible to any exciting causes of insanity.

Had we the statistics to show in how many of these cases the inherited degeneracy took its origin in alcoholism in the parents or ancestors, the number assigned to that cause would, no doubt, be largely increased. This is made probable by the fact that Dr. S. G. Howe, on careful inquiry into the percentage of 300 cases of idiocy, found that 145 of them were the children of acknowledged drunken parents.

Again only 1½ per cent of the female insane are reported as owing their insanity to intemperance. This fact, while it goes far to establish the intimate relation of causation between alcohol and insanity (for but very few, comparatively, of our American women drink habitually), would, no doubt, be greatly modified if the truth could be ascertained in respect to the hereditament of all these insane women, for, if it is established as a law of hereditament, as many writers believe, and as is very ably argued by Dr. John Stockton Hough,¹ that daughters resemble their fathers, while sons resemble their mothers, it follows that in a given number of insane or otherwise degenerated females, we ought to find the seeds of *their* degeneracy planted in the preceding generation of males; while in the cases of insane or otherwise degenerate males, we ought to trace the degeneracy back through their mothers to the second generation of males; so that the present generation of insane and alcoholized males will have a full representation in the next generation of insane females.

Is not the very fact that so many of the inmates of our asylums are recorded "unassigned" or "unknown," of itself suggestive that there may be in all that number a degeneracy of stock, though difficult to trace, yet surely the growth of seeds sown in preceding generations?

If these things could be fairly traced out, and alcohol had due credit for causing "business failures," "domestic trouble," "bereavements," "ill health," and "nervous prostration," which appear in the reports of asylums as the causes of so many cases of insanity, who can doubt that the percentage of cases justly assignable to alcohol would be nearly or quite equal to that given by Lord Shaftesbury for England?

From insanity produced by intemperance in the individual the road is often short and quick to dementia, imbecility, idiocy; and more especially is this true of insanity occurring as an outburst of a degeneracy whose origin was in alcoholism of parents or ancestors?

Says Dr. Sewell, "The inebriate first loses his vivacity and natural acuteness of perception. His judgment becomes clouded and impaired in its strength, the memory also enfeebled and sometimes quite obliterated. The mind is wandering and vacant, and incapable of intense or steady application to any one subject. In his cups the drunkard is generally a temporary madman."

But idiocy and insanity are not always temporary in the case of the drunkard. Both of these effects often become permanent in the future man.

"In some cases reason seems to be blotted out and the miserable victim of intemperance lives and dies a literal fool. In other cases, still more numerous, (and seen in almost every community) "there is a manifest approximation to idiocy where this deplorable consequence does not actually follow."

¹ Laws of Transmission of Resemblance from Parents to their Children. By John Stockton Hough, M. D., Philadelphia. A reprint from the Medical Record.

"Many a man," says Dr. Story, "has drunk himself into a fool. Many a bright boy and man of talent has become a fool while becoming a sot."

WHAT DOES THE DRUNKARD BEQUEATH TO HIS OFFSPRING?

The degeneracy by no means stops with the man himself. By a law of nature, running through the animal as well as vegetable kingdoms, "like begets like;" "they shall bring forth seed after their kind." "Traits of character, dispositions, aspirations, talents, propensities, passions, depraved conditions and diseases, may be inherited as well as form, looks, and complexion."

In accordance with this law drunkenness in the parents has a special tendency to produce *mental debility, low and depraved appetites, weakness of will, loss of moral sense, vice and crime, insanity and idiocy* in the offspring.

"Looking to the decided tendency to hereditary predisposition in the ordinary forms of insanity," says Dr. Carpenter, "looking also to the fact that any perverted or imperfect condition of the nutritive functions established in the parent, are also liable to manifest themselves in the offspring (as shown in the transmission of the gouty and tubercular diathesis), we should expect to find that the offspring of habitual drunkards would share with those of lunatics in the predisposition to insanity, and that they would moreover be especially prone to intemperate habits."

That "one drunkard begets another," as Plutarch says, may be proven by common observation and by many recorded opinions and observations. Dr. W. A. F. Brown, the resident physician of Crichton Lunatic Asylum at Dumfries, makes the following statement: "The drunkard not only injures and enfeebles his own nervous system, but entails mental disease upon his family. His daughters are nervous and hysterical; his sons are weak, wayward, eccentric, and sink insane under the pressure of excitement of some unforeseen exigency, or of the ordinary cares of duty."

Dr. S. G. Howe of Boston, in a report to the Massachusetts Legislature, says: "The habits of the parents of 300 idiots were learned, and 145, or nearly one-half, are reported as known to be habitual drunkards. Such parents, it is affirmed, give a weak and lax constitution to their children, who are consequently deficient in bodily and vital energy, and predisposed by their very organization to have cravings for alcoholic stimulants. Having a lower vitality they feel the need of some stimulation. If they pursue the course of their fathers, which they have more temptation to follow and less power to avoid than the children of the temperate, they add to their hereditary weakness and increase the tendency to idiocy in their constitution, and this they leave to their children after them." Dr. Howe, in a letter dated February 20th, 1874, confirms his opinion above given, by his subsequent observations.

"There is," says Dr. Carpenter, "a prevalent impression that idiocy is particularly liable to occur in the offspring when the conception has taken place, when one or both of the parents were in a state of intoxication." He quotes a striking example: "Both the parents were healthy and intelligent, and one, at least, habitually sober; but both were partially intoxicated at the time of the intercourse, and the offspring was completely idiotic." "There is," he says, "every reason to believe that the monomania of inebriety not only acts upon and renders more deleterious whatever latent taint may exist, but vitiates and impairs the sources of health for generations."

There has been sent me by one of my correspondents two sad illustrations of this terrible inheritance: "Five children were born in one family in Yates

County, New York, all of whom were idiots, and two children idiots in Steuben County, New York, whose parent's acknowledged that they were intoxicated when the conceptions took place."

Dr. Chas. A. Leas of Baltimore sends me the following: "A boy in New York was born drunk: *i. e.*, from his birth he had an irregular, unsteady muscular action. The boy was in, after years arrested for being drunk in the streets, and in the judicial examination it was proven that he had been so from his birth, and had inherited it from his father, who was a most terrible and habitual drunkard. In short it was shown and testified to by his mother that he had been born drunk and remained so."

I have myself frequently seen a girl upon the streets, now nearly or quite 18 years old, whose movements are, and have been from her birth, almost precisely those of a man so drunk that he can with difficulty reel along; and her countenance bears the idiotic expression of that condition. Her father, who has since died of delirium tremens, is believed to have been beastly drunk when she was begotten.

Dr. Chas. A. Story relates a case of "the first of seven children that was a complete idiot. Both parents were beastly drunk at the time of this child's conception. They quit drinking and the other six children have inherited about average intellects."¹

He relates another case in which "the first child has average common sense; the second is very much demented; and the third is a slobbering, drooling fool. The explanation is easy. After marriage the parents began drinking, and in six years had become perfect sots."

But it is not alone in the condition of actual intoxication that such fearful conditions are entailed upon the offspring. But we have, alas! too many illustrative cases among the moderate but regular drinkers of the "best liquors."

Sometimes children who have appeared to be fairly endowed in early childhood surprise their parents and friends, at or near the age of puberty, by the sudden outcropping of their inherited feebleness and imbecility.

²"A young man at the age of nineteen years was taken to the insane asylum at Mareville for mental derangement caused by excess in alcoholic drinking. As the inheritor of a good fortune, he received every attention and care in his early life, but they produced no effect on a perverse and obstinate nature, whose instincts were of the most cruel kind. When but three years old he was the terror of all the children in the neighborhood, whom he subjected to incredible tortures in the absence of older persons who would have restrained him. His chief pleasures of boyhood were in destroying and torturing animals. This young man had for his father a person who moved in educated society and filled important offices, but who was for a long time intemperate, concealing, however, the fact from the public eye. He had five children, only one of whom survived infancy, and he was the unfortunate being now described. Edward, as he was called by Dr. Morel, evinced in his tender years a great fondness for drawing and reading, and after a time was placed at college; but his teachers soon perceived that all their efforts were in vain, and that this boy, both in body and mind, was afflicted with an arrest of growth; his head was microcephalous and his intellect limited. On his return home he went rapidly through successive stages of degeneration by continual debauchery, until, tor-

¹ Alcohol: Its Nature and Effects.

² A paper written by Dr. Morel & quoted by Dr. John Bell in his report to the American Medical Association in 1859.

tunately, he was placed under restraint in an asylum. This young man labored under the double curse, first, of inherited predisposition, and secondly, of the example given to him by his father's excesses."

"Morel exhibits a picture of progressive degeneration of alcoholic origin, and its continuance in a family until it ended in the extinction of the latter, at the fourth generation. In the first generation there was immorality, excess in alcoholics, moral debasements. In the second, hereditary drunkenness, maniacal attacks, general paralysis. In the third generation, sobriety, hypochondriac tendencies, lupomania, systematic belief in persecutions, homicidal tendencies. In the fourth, limited intelligence, a first attack of mania at sixteen years of age, stupidity, transition to idiocy complete and incurable."

The following cases were sent me by Dr. Wm. B. Hazard, medical superintendent of St. Louis County Lunatic Asylum, in reply to circular:

"Mr. N—. No alcoholism in ancestors so far as known; a very hard drinker in his earlier manhood. His first three children, boys, were idiots,—idiocy almost complete. Mr. N. now reformed. His next son was bright but dissipated,—had to flee the country for forgery. Two daughters and one son followed, all of whom were excellent people."

"Two gentlemen named S—, now in middle life, both very hard drinkers. One has been in asylum many times with *mania a potu*; the other given to sexual excesses, adultery, etc. Their mother was a bastard and addicted to drink. One daughter of the first lewd, the other children not yet adult."

Dr. H. F. Lyster of Detroit kindly sent me the following:

"The father lived to be 48. He was of healthy stock and fine physique, had an excellent mind, was high bred, and educated to a profession. He had been brought up a moderate drinker, and during the last fifteen years of his life had been a very hard drinker, and the last seven years of his life an habitual drunkard, and mentally and physically disabled by alcoholic stimulants. It was during these fifteen years that most of the children were born. The mother lived to be 87 and has had thirteen children, and much care and work until within twenty years of her decease. She possessed a strong, healthy mental and physical constitution, much superior in both to the majority of people of the best class. Her mental and physical superiority existed until death. She was a total abstainer.

"Of the thirteen children, five died in infancy or early childhood of causes unknown to the writer, and were among the earlier children. Of those reaching adult life, one son died from accident at 22, healthy bodily and mentally, and not intemperate; one daughter of heart disease at 18, mentally bright; and one son died of softening of the brain at 45, after a three years' illness. One daughter has had chorea for years of an aggravated character, wholly unsitting her for society and rendering connected conversation impossible. Her age is 62. One son shows symptoms of approaching mental debility, at 59. One daughter nervous and near-sighted at 56. One son has had partial paralysis and softening of brain at 52. One son a confirmed drunkard, now 46. One daughter nervous, eccentric, and very near-sighted at 44. All were near-sighted.

"The men were all, with the exception of the one which died at 22 and the one now a confirmed drunkard, moderate drinkers. Previous to accidental death of one and the premature decay of the others, all were men of superior ability, education, and attainments, and were of excellent physique."

Case II. "Mother, English, a healthy, hard-working woman of 50, of low

mental organization and small head; had three sons, one, the oldest, almost '*non compos mentis*,' aged about 30, has epilepsy, no education; one of medium intelligence but not bright, aged 28; and one of very low degree of intelligence, no education, aged 24 years. The father died from apoplexy,—a man of good physique, but had been a hard drinker for years."

On this subject Dr. Andrew McFarland writes me as follows:

"Some instances occurring to me are very interesting. I know one old New England family line in which insanity has existed now for the fifth generation, not less than 150 individuals having been victims of that inheritance.

"When Dr. Bell of the McLane Asylum and myself were in charge of neighboring institutions, we could always count among our patients eight or ten out of this original family stock; and yet it produced persons of eminent ability, from President of the United States downward.

"In such notable instances there will be a great infusion of cases of dipsomaniacs, besides hard drinkers not classed as diseased.

"I thus believe,—though I cannot show facts absolutely to prove,—that these predispositions often date from some vigorously constituted individual, who ingrafted on the stock habits of inebriety. To show how and when vicious infusions get into an originally pure stock: as, for instance, in the case of the great and good Jonathan Edwards, some of whose descendants had a distinction in profligacy as great as his own for the opposite, would be interesting and profitable if we had the facts. But I believe the greatest disasters to blood come in on the female side; for it seems next to impossible for a dipsomaniac mother to have a progeny not very largely vitiated. It is only to cite common observation how liquor-drinking, opium-eating, and sexual excesses and looseness, cling as habits to certain families; a fact not all explainable on a theory of mutual example. If we could trace back, we should, I imagine, find the exact generation where the ruling vice came in, as we could where the royal house of Austria got its distinguishing lip, or the Bourbon his nose.

"It is your stout old hero, who goes to bed every night with liquor enough under his belt to fuddle half a dozen ordinary men, and yet lives out his three score years and ten, that will be found at the fountain head of the stock that pours into the world, generation after generation, such a crop of lunatics, epileptics, eccentrics, and inebriates as we often see. The impunity with which one so constituted will violate all physical law gets its set-off in a succeeding generation, when the great harvest begins.

"That 'the iniquities of the fathers are visited upon the children, that the fathers have eaten sour grapes and the children's teeth are set on edge,' are truths that no scripture is needed to teach. In other words, he who sins through physical excess does not do half the harm to himself that he does to the inheritors of his blood. The penalty *has got to be paid* as sure as the obligation of Faust to the Evil One."

Several of the superintendents of insane asylums have stated, in answer to the fourth question in the circular sent them, that the proportion of insane persons whose insanity appears to take its origin in an hereditary degeneracy from alcoholism in the parents or ancestors is increasing.

This may be only an apparent increase owing to the more careful scrutiny with which this very question is investigated, or it may be a real increase from the greater age of the nation, and the longer indulgence in alcoholic drinks by certain families, in whom the taint of blood becomes stronger in each succeeding generation. Indeed is not the greater proportion of insane persons in the

older States, as New York and Massachusetts, mainly to be explained in this way?

As the Western States grow older, will not such examples of entailed degeneracy in families or clans, as related above by Dr. McFarland, become common unless the very source of the degeneracy be dried up?

If this reasoning be true, it is not surprising that in England and Scotland, where for several centuries almost all the people have been habitual drinkers, and where the taint of blood, though very small three or four centuries ago, has been constantly deepening from generation to generation, there should be very many families giving a similar or even a darker history in respect to insanity, than the New England family above mentioned, while other families may have long ago, from the same cause, become extinct?

In this way it is easily to be believed that the proportion of insanity traceable to such degeneracy might be indefinitely increased.

Is not the very fact that after several generations such degenerate families do become exhausted the very salvation of the race?

Says Dr. S. G. Howe, in answer to a question in the circular: "Families are exhausted and become extinct, but not the race."

Thus the fearful judgment pronounced by God, "I will visit the iniquities of the fathers upon the children to the third and fourth generation," while it contains a condemnation and punishment for the sins of individuals and families, inherent in the very laws of physiology; contains, also, a merciful provision for the perpetuity of the race, in that it hints that the tainted blood and degenerate stock shall, after so many generations, become extinct and give place to others, and the accompanying benediction pronounced upon the righteous appears to warrant this interpretation.

DOES ALCOHOL SHORTEN THE LIVES OF THOSE WHO HABITUALLY DRINK IT?

From what has preceded, this question might very safely be answered in the affirmative. But in making up the case against alcohol, it is my purpose to establish every position by well authenticated facts or the conclusions of those whose business it has been to collect and collate such facts.

And here we are indebted largely to insurance companies and their actuaries for many facts bearing upon this question.

¹ Thus the policies issued by four of the principle offices (in England) amounted to 6,153 and the number of deaths during a given period to 117, being an average of almost 20 deaths to 1,000 members. During the same period the Temperance Provident Institution issued 1,596 policies and had only 12 deaths, or $7\frac{1}{2}$ per thousand, being nearly one-half less than the deaths in the most healthy non-teetotal offices, as follows:

1st office	issued	838	policies;	had	11	deaths;	13	to	1000.
2d	"	1,901	"	"	27	"	14	"	
3d	"	944	"	"	14	"	15	"	
4th	"	2,470	"	"	65	"	26	"	
T. P. Inst.	"	1,596	"	"	12	"	$7\frac{1}{2}$	"	

"In the government returns of the sickness and mortality of the European troops forming the Madras army for the year 1849, in which the men are classed as *total abstainers*, *temperate*, and *intemperate*, the results are highly favorable to the total abstaining soldiers. Of 450 *total abstaining* soldiers the rate per cent of admission into hospital for treatment of various diseases was 130.888. The rate per cent of deaths was 1.111. Of 4,318 *temperate* soldiers

¹ *Bacchus Dethroned. A Prize Essay.* By Frederick Powell.

the rate per cent of admission into hospital for treatment of various diseases was 141.593. The rate per cent of deaths was 2.315. Of 942 *intemperate* soldiers the rate per cent of admission into hospital for treatment of various diseases was 214.861. The rate per cent of deaths was 4.458. 'From these it will be seen,' says Dr. Carpenter, 'that whilst the number of deaths among 450 *total abstainers* during the year was 5, or 11.1 per thousand, the number among 4,318 *temperate* men was 100, or 23.1 per 1,000, being rather more than double the previous proportion. As to the *intemperate* the increase is frightful, for among 942 such men the number of deaths was not less than 42, or in the quadruple ratio of 44.5 per 1,000.'

Dr. Willard Parker of New York city, late President of the New York State Inebriate Asylum, in "Statistics of Inebriety," gives the results of the distinguished English actuary, Mr. Neison, who took a prominent part in investigating the influence of inebriety upon the risks of life insurance companies, both in this country and abroad, as follows:

1st. When in a given number of risks *ten temperate* persons die between the ages of fifteen and twenty inclusive, *eighteen intemperate* persons die.

2d. When in a given number of risks *ten temperate* persons die between the ages of twenty-one and thirty inclusive, *fifty-one intemperate* persons die, or the risk on an inebriate is more than *500 per cent* greater than on a temperate person.

3d. When in a given number of risks *ten temperate* persons die between the ages of thirty-one and forty inclusive, about *forty intemperate* persons die, or the risk is *increased 400 per cent*.

A person's chances of living at the various ages are given as follows:

At 20, the expectancy of a temperate person is 44.2 years, of an intemperate person 15.6. At 30, the expectancy of a temperate person is 36.5 years, of an intemperate person 13.8. At 40, the expectancy of a temperate person is 28.8 years, of an intemperate person 11.6.

These statistics and tables give an emphatic answer, *that alcohol does shorten the lives of its consumers*, and fully justifies the average per cent (28) given in the answers of physicians to the 3d question in the circular.

On account of the great length to which this paper has already come, I shall pass over the *relation of alcohol to accidents and the accidental destruction of human life* with simply an appeal to the common observation of men to justify my charge that more than one half of all the accidents occurring in the year, by sea and land, are chargeable more or less directly to alcohol.

In respect to *its relation to vice, — the social vice, — and the disease that is sown by and feeds upon it*, almost every physician can bear testimony, that, in a large majority of cases suffering from venereal diseases, the testimony of the victim is, "I drank, and when my passions were inflamed, my moral sense blunted, my conscience overwhelmed, and my will dethroned, I was led to the house if her 'whose steps take hold on hell.'"

For brothels to flourish, they must either keep liquors themselves or be located close to a drinking saloon.

Not one in ten of these places could be kept up for a year, were it not that the baser passions of men are inflamed and unbridled by alcohol in or near them.

I have no heart to describe the woeful inheritance of diseases in body, mind, and soul, of the children of parents in whom the poison of syphilis is mingled with that of alcohol.

But I cannot refrain from referring to some statistics showing *the relation of alcohol to crime*.

¹ "Mr. Simmons, governor of the Canterbury prison thus writes: 'The number of prisoners who have been committed to the prison with which I have been connected during the last fifteen years amounts to 22,000; among whom I have never met with one being a teetotaler.'

From the experience I have had I calculate that from 90 to 92 per cent. of all crimes are committed through taking intoxicating drink, in a direct or indirect way."

"The Rev. W. Caine, M. A., late chaplain of the Salford Hundred Jail says of 296 female convicts, 165 confessed that they were drunkards; of 704 males 480 admitted that they were drunkards."

The chaplain of the Massachusetts State's Prison testifies "that 19 out of every 20, confined within these prison walls were there for crimes committed through the agency of liquor."

Almost all our judges of Police Courts will coincide with the English Judge Coleridge, who says: "There is scarcely a crime that comes before me that is not, directly or indirectly caused by strong drink," and Judge Wightman, when he says "I find in every calendar that comes before me one unfailing source, directly or indirectly, of most of the crimes that are committed—in temperance."

Abundant statistics are at hand to show that the amount of crime varies in close ratio with the amount of liquors drank by a people. To only two such facts will I now allude.

¹ "In England and Wales during the four years succeeding 1820, the consumption of spirits amounted to 27,000,000 gallons, and the number of criminals committed for trial was 61,262. During the eight years from 1824 to 1832 the committals had increased 50 per cent and the consumption of spirits 77 per cent."

"In Scotland" says Dr. Nott, "in 1823 the whole consumption of intoxicating liquors amounted to 2,300,000 gallons; in 1837 to 6,776,715 gallons. In the meantime crime increased 400 per cent, fever 1600 per cent, deaths 300 per cent and the chances of human life diminished 44 per cent."

"In 1840, owing to the Great Temperance Agitation conducted by Father Mathew, the public houses within the police bounds of Dublin had lessened by 237, and the prisoners in the Richmond Bridewell, which had numbered 136 on the first of September 1839, were reduced to 23 on the sixth of November 1840."

"Lord Morpeth, when Secretary for Ireland, gave the following statistics in a speech on the condition of Ireland, delivered after a public dinner in Dublin. Of cases of murder, assault with attempt to murder, outrageous offence against the person, aggravated assault, cutting and maiming, there were in 1837, 12,096; 1838, 11,058; 1839, 1,097; 1840, 173.

"Of persons charged with murder within the police bounds of Dublin, in 1838, 14; in 1839, 4; in 1840, 2; in 1841, 1.

"The Temperance Agitation commenced in 1838, and by the tenth of October Father Mathew had inscribed on his roll of Teetotalers 2,500,000 names, and the consumption of spirits had decreased for the year 1840 by 5,000,000 gallons."

In the annual report of the Inspectors of the State Prison of this State, for

¹ Powell's Prize Essay.

1873, I find that of the 655 prisoners remaining in the Prison at the close of the year 305 or 46.57 per cent were intemperate; 143 or 21.83 per cent were moderate drinkers; 207 or 31.60 per cent are said to be "temperate."

I instituted an inquiry of the agent to learn if possible what per cent of the prisoners were the children of intemperate parents; but was sorry to learn that no such statistics had been attempted. If such statistics could be secured it would throw a flood of light upon the question as to whether the tendency to crime is inherited as an entailment from alcoholism in the parents or ancestors, and, I have no doubt, would show that, directly or indirectly, alcohol sends 90 per cent of the inmates to the State Prison.

Alcohol is chargeable with, by far, the greater proportion of pauperism.

Statistics are not wanting to demonstrate this proposition, but it really seems needless to advance them, when we consider the vast amount of money that is spent for intoxicating drinks, the immense number of days that are squandered in its use, the sickness that it produces, the constitutions that it breaks down, the loss of hope, courage, self respect, as well as the respect of others, that it begets, the degeneracy of the whole man that follows its use, and above all the physical, mental and moral degeneracy that it entails upon the children of its victims.

In reply to the question "in what percentage of cases, in your opinion, is the depraved appetite of the inmates of your institution, due to hereditary degeneracy, taking its origin in alcoholism in the parents or ancestors," Dr. Albert Day, late Superintendent of Binghamton Inebriate Asylum, says: "This class of inebriates are seldom found in our reformatory institutions. They are oftener found with the criminal classes and pauper establishments. They seldom seek reformatory influences. They are usually degenerate in mind and body—never aspire above a life of dependence and find only agreeable companionship with the low and vicious."

From this class our poor houses are largely filled.

My pen would certainly fail to portray the suffering, want, crime, misery, and degradation that alcohol causes to the people of Michigan.

I know that I have made a fearful indictment against alcohol; but, fully sustained by the facts, as I believe, it abundantly justifies me in bringing it, with some of its proofs, before you, and, through you, before the people of this State. Indeed, this Board would be recreant to its sacred duties if it did not faithfully publish these facts to the people; and will largely fail in the objects for which it was created, if it does not propose some means by which, if followed, these great and terrible burdens and curses upon a people may be escaped from.

Let me briefly summarize the indictment: Alcohol destroys a vast amount of the money of the people; squanders for the people of the State, in one year, hundreds of years of valuable time; it vitiates the blood, diseases and enfeebles all the organs of the bodies of those who use it; dethrones their reason; debases many to a lower level than the brutes; from intelligent, reasoning beings, it makes men drivelling idiots; makes men more susceptible to, with less power to resist, disease; begets in men a disease that enervates and destroys the will, overwhelms the conscience, and perverts the moral sense; entails upon their children every form of physical, mental and moral degeneracy,—makes them insane; makes them criminals; makes them idiots; exhausts the vitality, physical and mental, of whole families, and causes them to become extinct; causes more sickness and deaths in adults and children, than any other, yes, than *all other* preventable causes of sickness and death; it fills our

insane asylums, our hospitals and our alms-houses ; fills the land with crime, our reform schools, houses of correction, jails and State prisons with criminals ; brings a large proportion of the taxes upon the people ; and gives in return, nothing but the gratification of an animal appetite that grows more sensual every day.

In view of these tremendous and portentous evils what ought this Board to do ?

Carbon oils that do not stand a fire test of 150° are condemned, and this Board has done its plain duty in pointing out the danger of such oils, and the fact that manufacturers and their self-styled inspectors have been guilty of the grossest frauds in sending to Michigan oils far below the standard, and that endanger the people of the State with a dozen or twenty explosions in a year, killing or horribly disfiguring as many persons, and destroying, perhaps, as many thousand dollars worth of property : And this is our duty ; it is right, —the people approve.

Wall paper with Schele's green upon it, endangering a few families and killing perhaps a half dozen or so, persons in a year, has been tabooed by this Board, and labeled "poisonous"—"dangerous to life." Waters are analyzed, and the air of school-rooms tested, to warn against impurities that insidiously implant the seeds of disease in old and young ; filthy streets, reeking cesspools, and unclean slaughter-houses are declared nuisances, lest they breed disease and prepare the way for the winged pestilence ; and the people say *it is well*,—so let it be.

Shall we have nothing to say upon these direful and destructive effects of alcohol, so wide spread among the people, and reaching onward by their baneful influence, to the third and fourth generation,—even to the extinction of whole families ?

"God's great remedy for the world's great curse, is total and universal abstinence from making, selling and drinking intoxicating liquors."

Is a man with no vitiated tastes, and no inherited degeneracy, physical, mental or moral, perfectly safe from the horrid brood of evils of this demon ?

Such a man does not *love* alcoholic drinks ; he must *learn* to drink them. But his only safety is in always totally abstaining from them, for habitual indulgence in them, even slightly, vitiates his taste and begets a diseased appetite.

Can a young man who, from some taint of blood, has inherited from his parents or ancestors that morbid desire for stimulants, be secured from this brood of evils ? Yes ! if the taint of blood is not so strong as to wholly enervate the will ; but he, only, by totally abstaining. And is it not possible, that, by so doing, and by intermarrying with a person in whose blood there is no such taint, he may do much towards eliminating that taint from his descendants ?

But there is a large class of persons who have inherited such a taint of blood, and such a degree of degeneracy of stock, that their moral sense is blunted, and their wills overwhelmed by a depraved and demanding appetite, whenever they are in the presence of alcoholic drinks. Such persons can be kept from drinking and still further vitiating their constitutions, and bringing still deeper degeneracy upon their offspring, only by removing them from the temptation, or the temptation from them.

Again there are those, who, originally from undegenerate stock, have by former indulgences in drink generated within themselves a diseased condition, alcoholism, that declares itself, in one way, by an inordinate appetite for drink,

which makes a slave of the will, and renders it morally certain that they will drink if the temptation is still before them.

Now the State, as a law making power, appears at first sight to have done its duty by these classes of persons to protect them from the direful temptation, for in the Constitution the Legislature is prohibited from granting a license for the sale of intoxicating drinks, and the Legislature itself has repeatedly passed enactments prohibiting their sale under pain and penalties. But the fault is with communities,—with society,—that the laws are mostly a dead letter, unexecuted. Can this fault be obviated, and how? This is the inquiry of to-day.

Does the State or Society owe to a certain class of its citizens Inebriate Asylums?

While, by the silent approval of Society, if not by the authority of the State, alcoholic drinks are more freely, abundantly and conspicuously offered for sale than bread-stuffs, meats or groceries, there will always be a large class of citizens in whom the disease, *alcoholism*, has already developed insanity, or imbecility, and another large class upon whom, this disease in their parents, has entailed a degeneracy cropping out in all forms of defectiveness and crime. For these poor victims of the consequences of this disease, the State is already providing asylums, alms-houses, jails and prisons. But there are hundreds of men and women, now in this State, afflicted with this disease, alcoholism, in whom, as yet, insanity, as it is commonly understood, has not been developed, and whose degeneracy is not hopeless, but in whom, if neglected, the very worst consequences will follow.

Their appetite for drink is depraved, keen and clamorous; their wills are enervated and powerless, yet their better natures summon them, often with really strong desires, to go back and escape from the toils of the destroyer; but alas! in the constant presence of the tempter they are powerless to retrieve their lost condition.

Does the State or Society owe anything to such men?

I am no defender of that sickly sentimentalism and shallow ethics that would consider all drunkenness, all indulgence in alcoholic drinks, evidence of a disease that makes the man or woman more to be pitied than blamed; neither am I a believer in that silly casuistry that would consider the fact that so many persons drink alcoholic stimulants evidence that there is a divinely implanted desire and need for such things, and that the yielding to such desire moderately is no sin if not positively a virtue.

That this morbid desire for stimulants comes to some men as a direct inheritance from drinking parents or ancestors, who themselves had no such inheritance, is true; that it is in some men, depraved in all their instincts, on account of some inherited degeneracy of stock is also true; while many men create that appetite by indulgence in drink, under the social customs of society, or on account of some unfavorable physical conditions. Certainly in most of the cases the depraved appetite may be traced back through the generations until it first started in unmitigated sinful indulgence.

But the real practical question is not, "who did sin, this man or his parents?" but, being diseased, can the disease be stayed and he be restored again to society and to usefulness as a citizen?

If the State or society permits the free exhibition and sale of alcoholic drinks to these men, there is, certainly, due to them, that Inebriate Asylums be at once established where they may be restrained and kept from temptation until nature, assisted by careful hygienic and skillful medical treatment, res-

tores to them the equilibrium of their being, brings back their self respect, and re-establishes their wills. This would seem, indeed, to be but simple justice. *Man is his brother's keeper.* From Eden all along through the ages, has been ringing in the ears of society the voice of God "where is Abel thy brother?"

That a considerable proportion of such diseased persons, may, by restraint and seclusion in such an institution for a considerable length of time, be restored to themselves and to their families and society, is, I think abundantly proven by the reports of the Inebriate Asylums already established in this country.

In reply to a circular which I sent to these institutions, I received the following answers to this question: "What percentage of those persons, in whom the disease or depraved appetite takes its origin in alcoholism, either in the individual, or his parents or ancestors, are, in your opinion, curable?" From one,—"at least three-fourths;" from another,—"every man in whom the depraved appetite has resulted in alcoholism, who will use his *will power*, and has proper influences around him *which he will accept*, can be cured;" and from a third,—"very small indeed;" and from a fourth,—"thirty per cent, if time is given and all appliances continued."

And in reply to the question "which class is the most amenable to treatment?" the replies indicated that "more success was attained in the restoration of those who had contracted the disease from the indulgences in social life, in distinction from those who habitually drank alone," and in the "habitual" as distinguished from the "periodical" drunkards.

I was surprised at the small percentage of cases in these institutions, in whom the depraved appetite is due to hereditary degeneracy, taking its origin in alcoholism in the parents or ancestors, "five" or "ten" per cent. But Dr. Albert Day's note upon this point, before quoted, appears satisfactorily to explain it.

But as is manifest from the reports of these gentlemen, and also from the nature of the case, Inebriate Asylums can reach but a very small proportion of the victims of alcohol, and can fully antidote none of its baneful efforts. I do not believe the depraved appetite can ever be wholly eradicated, and no sooner does the reformed and restored inebriate leave the asylum than all the temptations that formerly surrounded him, are again weaving their, almost necessarily, fatal spells around him till he again falls and is a hopeless, helpless, ruined man.

Contemplate this fearful and absurd circle; society permits, and by its silence, upholds, the means that make Inebriate Asylums a part of her duty to citizens, and when she has done this duty she sends the restored man back to the same means, that by them "the second state of that man may be made worse than the first."

Although society may have attempted to pay some of its obligations to these unfortunate citizens, has she by that means discharged her duties to herself? Does she intelligently obey the first law of nature?

A few of the diseased ones are cared for, it is true, but the fountain from which flows the ever widening stream of disease and death is not stopped, nor has there been any attempt to cleanse its stygian waters, or set bounds to its demon-inhabited waves, or limit its horrid brood of evils.

I am sure that the moral sense of the people of Michigan will not be satisfied, nor will the evils of intemperance be considerably stayed until society shall every where throughout the State, rise up in its might and smite king

alcohol; utterly dethroning him; driving him, where he always should have been, to the place of a drug; a medicine or an adjuvant to the arts.

That so desirable, salutary, and just a condition of affairs can be brought about at once, I am not sanguine enough, for one moment, to expect. For its accomplishment there needs the united, continuous, and prolonged effort of all who see and deprecate these evils, and who study the well-being of society and the nobility and perpetuity of the State.

Let us look for a moment at the strength of the enemy with which we have to deal, and count some of his resources.

The amount of the retail sales in alcoholic drinks in this State for the year 1865 are given by the Commissioner of Internal Revenue for that year as \$52,874,170, and this vast sum was distributed among, say, 10,000 dealers. Now nearly or quite one-half this sum was profit, *i. e.*, over and above the cost of the liquors,—\$26,000,000 per annum profit upon this single business!

One-half of this vast sum would at any time be used as a corruption fund, if necessary, to defend and protect the other half; this sum, used by intelligent, determined men, makes an enemy of no small power or despicable resources. The influence of this money arrays for the defense of this traffic, not the dealers in intoxicating drinks and their immediate dependents alone, but many, very many, others, who with pharisaical pride "thank God that they are not so depraved and unmindful of the interests of society as these publicans," and yet, seeing some personal interest in this vast sum of gain from this business, are unwilling to say or do ought against it. The bankers receive the deposits of these dealers and dare not be known as opposers of the liquor traffic; the lawyer and the doctor count many of their clients or patients among the dealers or their victims; the merchant, tradesman, the mechanic and the daily workman, all fear to plant themselves in open declared opposition to the dram-selling business, lest their own revenues be curtailed. The great and prevailing cry is, especially in large villages and cities, "put down the traffic in alcoholic drinks, and you destroy a large portion of the industry of the people, and blot out at once, even for the State of Michigan, a business that brings to the people of the State a profit of \$26,000,000 per annum."

As in an ancient city, when the apostles of a pure and elevating Christianity proclaimed its life-giving principles to the people, men who had their wealth by a certain occupation were able to induce a whole city to cry out "great is Diana of the Ephesians," so, to-day, for precisely similar reasons are many found to join in the cry "great is King Alcohol, and the business that it gives to a community." The cry of to-day is just as base and specious as that in Ephesus 1800 years ago. And yet this very cry is the reason why in our large villages and cities the prohibitory law of the State is not executed. Its speciousness will be seen from the fact that not one-fourth of the intelligent men who join in it but will confess that if alcoholic drinks could in one month be driven from the community, society would move on far more prosperously, and all that money and industry be employed in occupations that would vastly increase the business of the place and bring far more real profit to the people.

Money, then,—the \$26,000,000 per annum,—with all its varied and widespread influence, constitutes the enemy's means of defense.

As men are constituted, those who have waged war against alcohol and its traffic, must bring the same weapons to bear against it that are used in its defense.

As the "*almighty dollar*" is the only argument that can reach many men upon this question, this argument must be theoretically and practically urged

until it is demonstrated, and men are made to *feel* that to sell rum is not only disgraceful and outrageously sinful, but is, actually, a pecuniary loss to individuals and to communities.

While society permits this business to be carried on in spite of the position of the State, as shown by her constitution and her prohibitory enactments, its evil effects can, and ought to be limited and mitigated in various ways, some of which I shall endeavor to point out.

The baneful influence which so-called, "patent medicines," and especially those bearing the name "bitters," have in securing recruits to the great army of inebrates, is a matter of common observation, and has been mentioned in numerous answers to the circular to physicians.

Some men drink these vile compounds, it is true, intelligently, thinking it a concealed, or an excused way of taking whiskey,—but many others, somewhat ailing, and for whom a neighbor, or, perhaps a lazy or ignorant doctor has recommended some "bitters," take them in ignorance and continue to do so until the depraved appetite has been generated and fixed, and the way down to confirmed inebrity is straight and swift.

That I might speak intelligently upon this point, I have requested Prof. R. C. Kedzie to make an analysis of two specimens of these "bitters." I give his analysis below:

LANSING, Feb. 4, 1874.

H. O. Hitchcock, M. D., President of State Board of Health:

DEAR DOCTOR:—I have examined a bottle of "Drake's Plantation Bitters" and find it contains 36½ per cent of alcohol.

I have also examined a bottle of "Hostetters' Stomach Bitters," and find it contains 40½ per cent of alcohol."

Very respectfully,

R. C. KEDZIE,
Member of State Board of Health.

The Doctor adds, "It is horrible to think that the sick and feeble should be beguiled by the promise and hope of health to resort to the use of these "bitters"—persons, too, who would recoil from the habitual use of whiskey and rum. Yet if they use these bitters *according to directions* and follow this course for any long period of time, they are unwittingly on the road to drunkenness. Any one would recognize this danger if advised to take "a wineglassful" of whiskey or rum before each meal, but when they do the same thing *unwarned*, they still run the same perilous course so far as the establishment of the alcoholic appetite is concerned.

Drake's Plantation Bitters purports to be St. Croix Rum, with "Calasaya bark and other roots and herbs." It contains 36½ per cent of alcohol, or a pint of poor rum, and four ounces of other material for flavoring, etc. Its use as a morning appetizer old soakers will fully appreciate.

Hostetter's Bitters is worse than Drake's, as it contains more alcohol and that more nicely disguised with sugar and aromatics. Twenty ounces (a bottle) of Hostetter contains the alcohol of one pint of whiskey."

Is it not the duty of this Board to recommend to the Legislature to pass a law requiring that the manufacturers of all such "bitters," if they are to be sold at all in this State, should put conspicuously upon their label of each and every bottle the exact per cent of alcohol in its contents? This would compel these vile compounds at least to take their places with alcoholic drinks where they belong. Let the failure to so label each and every bottle of such

medicines sold within the State be visited with condign punishment, both upon the manufacturer and upon the seller.

The Legislature has wisely passed an act to prevent the advertisement and sale of drugs and medicines designed to produce criminal abortion; but shall the State put such obstacles in the way of a woman who would prevent herself from becoming the mother of a child by a debased and drunken husband with all the possibilities attaching to that child of being idiotic, insane, a criminal from inherited predisposition, or a worse drunkard than him who begat him; and shall it not put any obstacle in the way of a father or a mother becoming unwittingly possessed of the drunkard's appetite, and unwittingly made to bequeath to their offspring the drunkard's entailments?

In view of the alleged, and apparent failure of prohibition, as it has assumed shape in our State constitution, and the former enactments of the Legislature, many persons, who sincerely deplore the great and increasing evils of intemperance, are most strenuously urging that the State should recede from its prohibition grounds and enact a stringent license law.

Indeed such a change in the State constitution has been proposed by the recent Constitutional Commission, and has just been discussed by the Legislature.

Whether it would be submitted again to the people to choose between license and prohibition in the organic law of the State was, for a time, uncertain. That many who strenuously advocate this measure are honest in their effort to inaugurate it, and sincere in their belief that, when inaugurated, it will largely diminish the evils of the whiskey traffic, I have no doubt.

The shrewd and cunning liquor dealers have played their game very deftly until they supposed the question was fairly before the people for approval or rejection. Then they have at once come out with a "Confidential Circular" to the "Liquor Trade," in which all the "40,000 voters in the State who are directly interested in the license question," are urged to come up unitedly to the support of the measure. "The Leader" has been established in the interests of license, and all liquor men are invited to become agents for its circulation.

Subscriptions to the "Leader" can be sent to any of the 130 subscribers to the "Confidential Circular."

Does this movement on the part of liquor men look as if "license" was expected to decrease the sale of their wares? Does it look as though "license" was expected to decrease and "hedge in" the evils growing out of the liquor traffic, or to "hedge in" the liquor dealers, by the protecting arms of the State?

It may be urged, with truth, perhaps, that a high rate of license will shut up many of the small retail establishments, which by the more pretentious saloons and bar-rooms are called "low doggeries;" but will it decrease the amount or improve the quality of the liquor drank? Where do our young men start to become drunkards?—at the "low doggeries" or at the more pretentious saloons and in the bar-rooms of our first-class hotels?

If the *starting places* for drunkards are not diminished, but on the contrary are amplified by means of license, and made more respectable by the sanction and protection of the State, will such a system reduce the number of drunkards or mitigate the evils of drunkenness? Would not these very saloons, compelled to pay largely for the protection of the State, seek to whelm a greater number of victims into their hellish vortex than if they should remain as to-day, *outlawed* by the State?

Can a State which has stood up so nobly against this diabolic trade for eighteen years now be persuaded to trail her flag to such an enemy?

Far better let the wretched work go on under protest and in spite of prohibition, than to be a yielding and a willing agent to carry it on!

But I am sure that the question is not to-day between "*free rum*" under the prohibition of the State and "*protected rum*" under the license of the State. I am confident that the time is not very distant when the moral sense of the people upon this question, educated and awakened, shall create such a public opinion in every community that the prohibitory enactments shall no longer remain a dead letter; but the people shall arise in their majesty, and the bodies and the souls of the citizens of the State shall be protected and defended, instead of the "hell-fire" that now burns and destroys them.

The woman's movement in this cause is the outgrowth of an enlightened and an awakened conscience that pervades the whole people. It recognizes the power of the enemy; knowing that "this kind goeth not out but by prayer and fasting," it takes hold of an arm stronger than man's and above the State. Every one who loves his fellow men, and rejoices in the downfall of evil, though he might not have inaugurated such a movement, yet, with all his heart, wishes it a God-speed!

Would to God, that, as John the Baptist was a precursor of one that was greater than he, even so this movement may be the precursor of a movement that shall wholly overthrow the demon alcohol, and shall usher in the kingdom of temperance and good will to men!

But this woman's movement must be supplemented by an earnest aggressive movement of society under the prohibitory laws of the State.

What shall that movement be? Given, the following elements of the question, how shall the question be solved? License is prohibited by the State Constitution; the sale of liquor is prohibited by the laws of the State; the sale of intoxicants is carried on to an enormous extent by many hundred citizens; this sale makes inebrates; makes insane; makes paupers; makes idiots; projects these entailments into future generations; makes more criminals than all other causes; levies a vast burden of taxes; brings more want, suffering, and misery upon the people than all other causes.

A question with such pressing and fearful elements must have an answer. If it is decided that the few who sell liquor, and fatten upon the woe, the poverty, and the miseries of others, cannot effectually be hindered from doing it, is it not at least fair that they be required to bear the burdens which they create? It would certainly seem but simple justice that a special tax be placed upon every liquor dealer in the State, of a certain per cent upon the amount of the sales; for example, 5 per cent on the wholesale sales, and 10 per cent on the retail sales, the amount of sales to be given under oath. This tax should, upon the tax books, as well as upon the tax receipts, be thus divided and named; one portion (to be fixed by law) for the cure and restoration of inebrates; one portion for the cure or care of those made insane, directly, indirectly, or hereditarily, by alcohol; one portion for the care and maintenance of idiots and paupers, made so directly, indirectly, or hereditarily, by alcohol; and one portion for the punishment and cure of criminals, made such, directly, indirectly, or hereditarily, by alcohol.

Such a tax would be based upon a principle that would seem to be eminently fitting and just. Indeed, the State has already recognized the principle in the enactment of the recent dog-law, in accordance with which every keeper of a

dog has to pay a tax that goes to pay for sheep that may be killed by dogs throughout the State.

But the keepers of some of the more "respectable" saloons and "bar-rooms of first-class hotels," say, "the whiskey sold by us makes no man an inebriate, insane, idiotic, or a criminal, and we ought not to be taxed as the keepers of these 'low doggeries' are." But the "low doggeries" would answer, "we are the same breed of dogs as you, only that you are better fed than we." "You wound and demoralize the fair and sound sheep, and we feed upon the sheep that you have ruined."

But however just and righteous such a tax law would be, would it meet the whole case? Would it abolish the sale of intoxicants? I think not. For although the sale should be branded and constantly and publicly advertised as a drunkard-insane-idiot-pauper-criminal-producing business, and should thus become vastly unpopular, and none but the abandoned would engage in it still there would be found plenty of men base enough even then, for filthy lucre's sake, to carry it on, and under such a stigma would try to drag as many to destruction as possible. Chains are the only means that will keep some dogs from killing sheep. But there is one other element to be added to the case, viz.: the fact that *communities or society does now uphold the sale of liquor by its silent acquiescence and its neglect to execute the prohibitory laws.* This element added to those already named, the complete and perfect cure for these dreadful evils seems most naturally to be indicated.

Let the Constitution of the State be changed if necessary, so that the Legislature may pass a law requiring that any township, village, or city, that shall neglect to execute the present prohibitory liquor law, and shall permit the sale of intoxicating drinks within its boundaries, except as may be specified, shall levy upon all its tax-paying inhabitants a tax of a certain per cent of the amount of all the sales of intoxicating drinks within its boundaries, which tax shall be collected as other taxes are, and shall be paid into the treasury of the county, and shall be held sacred, in all its parts, for the purposes specified upon the tax roll and the tax receipts, which purposes shall be as follows, viz.: one portion (to be fixed by law) for the cure and restoration of inebriates; one portion for the cure and care of those made insane, directly, indirectly, or hereditarily, by alcohol; one portion for the care and maintenance of idiots and paupers, made so, directly, indirectly, or hereditarily, by alcohol; and one portion for the punishment and reformation of criminals, made such directly, indirectly, or hereditarily, by alcohol.

Is it not quite time for the State to put upon its statute book the fact, by inference, at least, that intoxicating drinks are chargeable with the great crimes alleged against them?

Such a law would be based upon the principles of justice and equity. Openly charging the great evils that now are pressing down upon society like an incubus, directly to their source, it would do much towards alleviating those evils by providing means for the cure and restoration, or the care and maintenance of their victims. It would lay the cure or care of the victims upon the very people who are responsible for their being victims. It would be like the voice of God telling men that *they are their brother's keepers.*

But, says one, "only those who actually engage in selling intoxicating drinks are responsible for the evils which they do, and they only ought to be taxed for the damage which they cause." The State, conscious of the righteousness of her former laws on this subject, sitting with even balance, answers, "Here-

tofore I have forbidden the sale of alcoholic drinks among my citizens, because I knew and deprecated the fearful consequences of such sale, and would have shielded all my citizens from them; and yet the sale has been continued, because in many towns, villages, and cities my citizens have not had the moral courage to say the law shall be executed. Besides many citizens, who know full well the effects of whiskey-drinking, because they think that some part of the proceeds of its sale may come to their pockets, have utterly refused to aid or abet the execution of my salutary laws, but have lent the whole moral power of their silence to those who willfully disobey my laws; while others have thought to court political favor and secure some office under my government by giving the whole force of their silent acquiescence to the free sale of whiskey.

"In some places, it is true, my citizens have faithfully executed the laws and and the terrible effects of whiskey-drinking have been largely avoided.

"And yet, heretofore the taxes that have been incurred in consequence of this traffic have been spread upon all my citizens alike, both upon those who spurned my commands, and by their disobedience created those taxes, and those who obeyed my laws; both on those who lent their moral influence to the execution of my laws, and on those who gave the moral power of their silent acquiescence to the breaking of my laws.

"Hereafter, it is my purpose that the consequences of evil doing shall be visited upon those only who disobey, or by the moral power of their silence encourage disobedience, and protect the disobedient.

"It is my purpose also to take those burdens from those who obey and encourage obedience to my laws.

"I can assure all my citizens that in the same degree in which they obey and secure obedience to my laws, will they be relieved of the burdens of these taxes.

"I have taken this way to educate my citizens concerning the great and terrible evils of intemperance, and also concerning the crime of silently acquiescing in the disobedience of others. I want to teach them, too, that although '*millions*' are now held out to tempt them on the side of whiskey and disobedience in its sale, yet the gains of obedience to my salutary laws are not to be computed by even '*millions*'.

"Do the citizens of any town, village or city shrink from bearing the burden of the taxes I have named? They have only to compel obedience to my laws, and the taxes are not levied, for the necessity for those taxes does not exist. There is, also, no township, village or city, within my boundaries, where the intelligent, moral, and Christian citizens could not within three months, if their whole moral power was exerted, compel complete obedience to my laws of prohibition."

Gentlemen, for the education of the people of this State upon all matters touching this subject, so that the enactment and execution of such a law may be possible, carrying with it the execution of the present prohibitory laws of the State, and thus saving the State, both in the present and future generations, from the terrible entailments of alcohol, it must be ours to labor.

We need more exact and complete statistics on all branches of this subject.

What percentage of the people of the State do actually drink alcoholic liquors?

How many persons in the State do actually die annually, directly or indirectly, from the effects of alcoholic drinks?

Our present system of collecting the vital statistics is but the sheerest

mockery as it regards this matter, when every sort of disease is given to cover up deaths from alcoholism.

We greatly need reliable statistics concerning the hereditament of physical and mental degeneracy from the effects of alcohol, and concerning the hereditary predisposition to crime and vice from the same cause. These can be secured only, or at least the best, in our insane asylums and asylums for other defectives, our alms-houses, reform schools, jails, houses of correction and State prison.

Would it not be well if this Board were placed in charge of these statistics, and authorized to design blank tables for each of the above named institutions, whereby their officers might further our efforts to secure such statistics?

We need, too, to secure the exact or approximately exact figures as to the percentage of crime fairly attributable to alcohol, and the cost to the State of its detection and punishment. These statistics might be gathered by all criminal courts upon blanks to be designed by this Board, and would be of the utmost importance in the education of the people upon this subject. The statistics gathered annually by this Board, or by the officer who shall have them in charge, should be published and thoroughly circulated so as to reach every citizen of the State.

But so much cannot be hoped of the present generation of adults as of those who are now children in our public schools.

As the children are the great hope of the State, one of the greatest desiderata of our times is a manual of health for our public schools that shall not only embrace all the general principles of hygiene, but shall be especially full, clear, and distinct in its teachings, enforced by reliable statistics in respect to the influence upon the body and mind of the habitual or free use of the narcotic or narcotico-acrid stimulants.

It would give me great pleasure if such a book were now at hand which this Board might recommend for adoption into our public schools.

Should some philanthropist awake to the welfare of the coming generations or should the Legislature, at the suggestion of the Governor, offer a worthy prize for the production of the best work of this sort, covering the grounds I have named, I have no doubt that we should very soon be able to recommend for adoption into our public schools, a book every way in advance of any school physiology now extant, and a book that would accomplish very great good in staying the terrible evils of intemperance.

I desire to acknowledge my indebtedness for very many of the facts and statistics in this paper to the following authors, viz: Dr. Wm. B. Carpenter, F. R. S.; Dr. Henry Munroe, F. L. S.; Dr. W. Marcket, F. R. S.; Dr. F. R. Lees, F. S. A.; Frederick Powell, Dr. John Bell, and Dr. Chas. A. Story.

